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From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

Keller & Partner AG

To:

Rec'd PCTO 12 OCT 2004

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PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing

(day/month/year)

09.07.2004

Applicant's or agent's file reference

RS/pe-16075

IMPORTANT NOTIFICATION

International application No.

PCT/CH 03/00246

International filing date (day/month/year)

11.04.2003

Priority date (day/month/year)

12.04.2002

Applicant

DELTA ENERGY SYSTEMS AG

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international
preliminary examining authority:

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09. Juli 2004

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Keller & Partner AG

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference RS/pe-16075		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/CH 03/00246	International filing date (day/month/year) 11.04.2003	Priority date (day/month/year) 12.04.2002	
International Patent Classification (IPC) or both national classification and IPC H01F27/28			
Applicant DELTA ENERGY SYSTEMS AG			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 7 sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the opinion</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>			
Date of submission of the demand 10.11.2003		Date of completion of this report 09.07.2004	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized Officer Durville, G Telephone No. +31 70 340-2961 	

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/CH 03/00246

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-10 as originally filed

Claims, Numbers

1-31 received on 12.05.2004 with letter of 12.05.2004

Drawings, Sheets

1/7-7/7 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☒ the claims, Nos.: 32,33
☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-31
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-31
Industrial applicability (IA)	Yes: Claims	1-31
	No: Claims	

2. Citations and explanations

see separate sheet

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Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1 Reference is made to the following documents:

D1: WO 00-11687-A (ALLISON-HERMAN; FRICKER RONALD-KEVIN (ZA);
SMIT MARTHINUS CHRISTOF) 2 March 2000 (2000-03-02)

D2: US 2001/020886 A1 (NAGAI JUN ET AL) 13 September 2001 (2001-09-13)

D3: US-A-6 069 548 (BAARMAN GOESTA ET AL) 30 May 2000 (2000-05-30)

2 Independent claims 1 and 14 do not meet the requirements of the PCT in respect of inventive step, the reasons being as follows:

Document D1, which is considered to represent the most relevant state of the art, discloses (cf. fig. 1-13; page 3, lines 14-18 and claims 1 and 11) all the features or method steps of claims 1 and 14 except for the feature that the core forms a single unbranched and closed flux path. The problem to be solved by the present invention may therefore be regarded as reducing the size of the transformer. The solution proposed in the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons: it is generally known to the person skilled in the art that the feature of a single unbranched and closed flux path is an equivalent to the feature of an E core and can be interchanged with that feature where circumstances make it desirable.

3 Independent claims 13, 21 and 31 do not meet the requirements of the PCT in respect of inventive step, the reasons being as follows:

As far as claims 13 and 31 are concerned, document D2, which is considered to represent the most relevant state of the art, discloses (cf. fig. 6 and claim 1) all the features of claims 13 and 31 except for the multilayer circuit element. On the other hand, D1 discloses all the features of claim 21, again except for multilayer circuit element. The problem to be solved by the present invention may therefore be regarded as reducing the size of the transformer. The solution proposed in the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons. This feature is described in document D3 (cf. col. 1, lines 39-45) as providing the same advantages as in the present application. The skilled person would therefore regard it as a normal design option to include this feature in the transformer described in document D2 (for claims 13

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and 31) or D1 (for claim 21) in order to solve the problem posed. Again, it is generally known to the person skilled in the art that the feature of a single unbranched and closed flux path is an equivalent to the feature of an E core and can be interchanged with that feature where circumstances make it desirable.

4. ~~Claims 2-12, 15-20 and 22-30 do not contain any features which, in combination~~
with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, the reasons being as follows:
- D1 discloses a planar transformer and further discloses all additional features set out in claims 10, 11 and 19, so that the subject-matter of claims 10, 11 and 19 does not involve an inventive step.
 - D3 discloses a planar transformer and further discloses all additional features set out in claims 2, 3 and 4, so that the subject-matter of claims 2, 3 and 4 does not involve an inventive step and does not satisfy the criterion set forth in Article 33(3) PCT in light of the combination of documents D1 and D3.
 - In claims 5-8, 9, 12, 15-18, 20 and 22-30, a slight constructional change is defined which comes within the scope of the customary practice followed by persons skilled in the art.
5. Claims 1 to 31 relate to a transformer and are therefore susceptible of industrial applicability (A.33(4)PCT).

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